



ZION Series

Half-Cell Bifacial Module

445-460Wp | **21.16%**
Module Power Output | Max Efficiency



Key Features



High module conversion efficiency



Better temperature coefficient



Super multi busbar technology



Low attenuation long warranty



Superior load capacity



Higher bifaciality

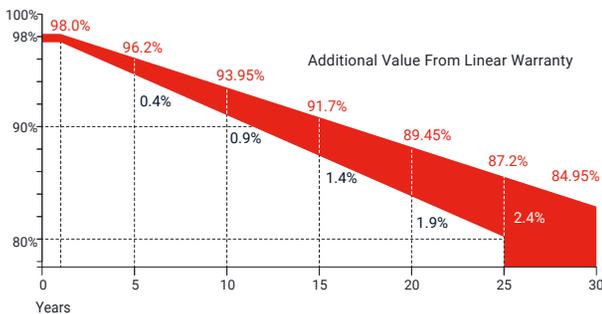


USA based liability insurance



Houston, Texas based company

Warranty



15 Years Guarantee on product material and workmanship

30 Years Linear power output warranty

Product Certification

IEC61215; IEC61730; UL61215; UL61730	
IEC62804	PID
IEC61701	Salt Mist
IEC62716	Ammonia Resistance
IEC60068	Dust and Sand
IEC61215	Hailstone
Fire Type (UL61730): Type 29	
ISO14001:2015; ISO9001:2015; ISO45001:2018	
	
	
	
	

About SEG Solar

Founded in 2016, SEG is a leading vertically integrated PV manufacturer headquartered in Houston, Texas, U.S., and is dedicated to delivering reliable and cost-effective solar modules to the utility, commercial, and residential markets. By the end of 2024, SEG had shipped over 6 GW of solar modules worldwide and have achieved a module production capacity of 6 GW.



Download Datasheet

Electrical Characteristics

Module Type	SEG-445-BMA-BG			SEG-450-BMA-BG			SEG-455-BMA-BG			SEG-460-BMA-BG		
	STC	NOCT	BNPI									
Maximum Power -Pmp(Wp)*	445	334	487	450	338	493	455	342	498	460	346	503
Open Circuit Voltage -Voc(V)	49.90	46.60	49.90	50.10	46.80	50.10	50.30	46.90	50.30	50.50	47.10	50.50
Short Circuit Current -Isc(A)	11.34	9.17	12.41	11.42	9.22	12.50	11.49	9.29	12.58	11.57	9.34	12.66
Maximum Power Voltage -Vmp(V)	41.60	38.50	41.60	41.80	38.70	41.80	42.00	38.90	42.00	42.20	39.10	42.20
Maximum Power Current -Imp(A)	10.70	8.68	11.71	10.77	8.73	11.79	10.84	8.80	11.86	10.91	8.85	11.94
Module Efficiency(%)	20.47			20.70			20.93			21.16		
Power Tolerance(W)							(0, +4.99)					
Maximum System Voltage							1500V DC					
Maximum Series Fuse Rating							25 A					
Bifaciality							70±10%					

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5

NOCT: Irradiance 800W/m² ambient temperature 20°C module temperature 45°C wind speed: 1m/s

*Measuring tolerance: ±3%

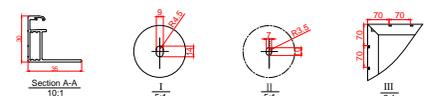
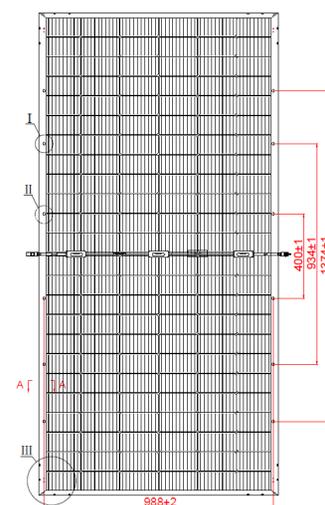
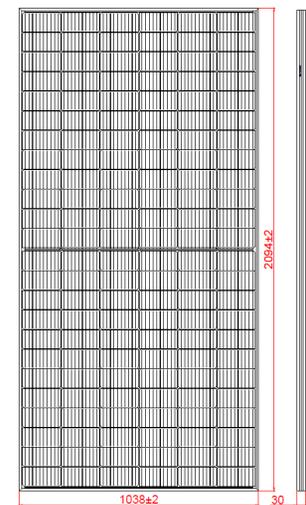
BNPI: Front irradiance 1000W/m², Rear irradiance 135W/m²

Mechanical Specifications

External Dimension	2094 x 1038 x 30 mm
Weight	28.0 kg
Solar Cells	PERC Mono-crystalline 144 pcs(72 x 2)
Front Glass	2.0 mm AR coating heat strengthened glass
Back Glass	2.0 mm heat strengthened glass
Frame	Anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Connector Type	MC4 or others
Cable Type	12 AWG PV Wire(UL)
Cable Length	400 mm(+), 200 mm(-) or customized length
Mechanical Load(Front)	5400 Pa / 113 psf*
Mechanical Load(Rear)	2400 Pa / 50 psf*

*Refer to SEG installation manual for details

Technical Drawing



Temperature Characteristics

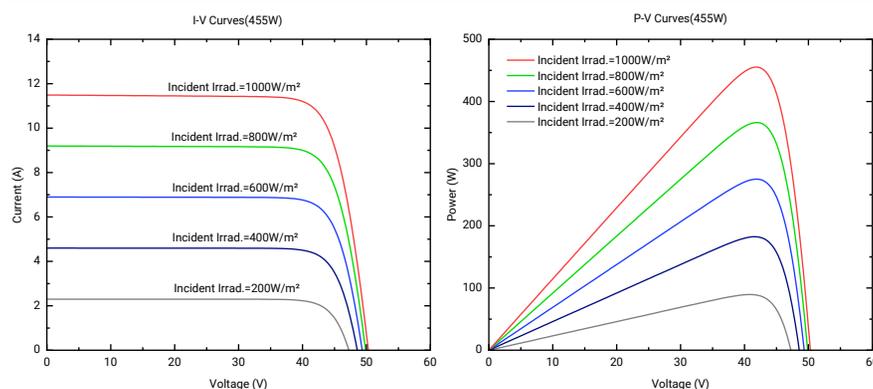
Pmax Temperature Coefficient	-0.35 %/°C
Voc Temperature Coefficient	-0.27 %/°C
Isc Temperature Coefficient	+0.05 %/°C
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature (NOCT)	45±2 °C

Packing Configuration

Container*	20'GP	40'HQ	40'HQ (For USA)
Pieces per Pallet	36	36	36
Pallets per Container	5	22	18
Pieces per Container	180	792	648

*Refer to the SEG container technical documentation for 53' box trailer or other trucks loading quantity

Curves of PV Module



*Refer to SEG installation manual for details